1:Heckewelder M-5 (ca. 1800)1819
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from ice, must be an obstacle to the hunter, when in pursuit of a wounded deer, bear, or other animal, as is often the case. Nor has he then leisure to think on the state of his body, and to consider whether his blood is not too much heated to plunge without danger into the cold stream, since the game he is in pursuit of is running off from him with full speed. Many dangerous accidents often befal him, both as a hunter and a warrior, (for he is both) and are seldom unattended with painful consequences, such as rheumatism or consumption of the lungs, for which the sweat-house, on which they so much depend, and to which they often resort for relief, especially after a fatiguing hunt or warlike excursion, is not always a sure preservative or an effectual remedy.

The husband generally leaves the skins and peltry which he has procured by hunting to the care of his wife, who sells or barters them away to the best advantage for such necessaries as are wanted in the family; not forgetting to supply her husband with what he stands in need of, who, when he receives it from her hands never fails to return her thanks in the kindest manner. If debts had been previously contracted, either by the woman, or by her and her husband jointly, or if a horse should be wanted, as much is laid aside as will be sufficient to pay the debts or purchase the horse.

When a woman has got in her harvest of corn, it is considered as belonging to her husband, who, if he has suffering friends, may give them as much of it as he pleases, without consulting his wife, or being afraid of her being displeased; for she is in the firm belief that he is able to procure that article whenever it is wanted. The sugar which she makes out of the maple tree is also considered as belonging to her husband.

There is nothing in an Indian's house or family without its particular owner. Every individual knows what belongs to him, from the horse or cow down to the dog, cat, kitten and little chicken.

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60 to be laid up for weeks and months at a time on this account, and I have seen boys 10 and 12 years of age, who through colds or fits of sickness had become so contracted that they never afterwards recovered the use of their limbs. 164

Worms are a very common disorder among Indian children, and great numbers of them die from that cause. They eat a great deal of green corn when in the milk, with beans, squashes, melons and the like; their bellies become remarkably large, and it is probably in that manner that the worms are generated. I rather think that Indian children suffer less in teething than the whites.

The gout, gravel, and scrophula or king's evil, are not known among the Indians. Nor have I ever known any one that had the disorder called the *Rickets*. Consumptions are very frequent among them since they have become fond of spirituous liquors, and their young men in great numbers fall victims to that complaint. A person who resides among them may easily observe the frightful decrease of their numbers from one period of ten years to another. Our vices have destroyed them more than our swords.

CHAPTER XXIX.

REMEDIES.

THE *Materia Medica* of the Indians consists of various roots and plants known to themselves, the properties of which they are not fond of disclosing to strangers. They make considerable use of the barks of trees, such 757 278

1:Heckewelder M-5 (ca. 1800)1819
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as the white and black oak, the white walnut, of which they make pills, the cherry, dogwood, maple, birch, and several others. They prepare and compound these medicines in different ways, which they keep a profound secret. Those preparations are frequently mixed with superstitious practices, calculated to guard against the powers of witchcraft, in which, unfortunately they have a strong fixed belief. Indeed, they are too apt to attribute the most natural deaths to the arts and incantations of sorcerers, and their medicine is, in most cases, as much directed against those as against the disease itself. There are, however, practitioners among them who are free from these prejudices, or at least do not introduce them into their practice of the medical art. Still there is a superstitious notion, in which all their physicians participate, which is, that when an emetic is to be administered, the water in which the potion is mixed must be drawn up a stream, and if for a cathartic downwards. This is, at least, innocent, and not more whimsical perhaps, nor more calculated to excite a smile, than some theories of grave and learned men in civilised countries.

In fevers the Indians usually administer emetics which are made up and compounded in various ways. I saw an emetic once given to a man who had poisoned himself with the root of the May Apple.* It consisted of a piece of racoon skin burned with the hair on and finely powdered, pounded dry beans and gunpowder. These three ingredients were mixed with water and poured down the patient's throat. This brought on a severe vomiting, the poisonous root was entirely discharged and the man cured.

In other complaints, particularly in those which proceed from rheumatic affections, bleeding and sweating are always the first remedies applied. The sweat oven is the first thing that an Indian has recourse to when he

* Podophyllum peltatum.

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feels the least indisposed; it is the place to which the wearied traveller, hunter, or warrior looks for relief from the fatigues he has endured, the cold he has caught, or the restoration of his lost appetite. 757 ● 515

This oven is made of different sizes, so as to accommodate from two to six persons at a time, or according to the number of men in the village, so that they may be all successively served. It is generally built on a bank or slope, one half of it within and the other above ground. It is well covered on the top with split plank and earth, and has a door in front, where the ground is level to go or rather to creep in. Here, on the outside, stones, generally of about the size of a large turnip, are heated by one or more men appointed each day for that purpose. While the oven is heating, decoctions from roots or plants are prepared either by the person himself who intends to sweat, or by one of the men of the village, who boils a large kettleful for the general use, so that when the public cryer going his rounds calls out *Pimook!* "go to sweat!" every one brings his small kettle, which is filled for him with the potion, which at the same time serves him as a medicine, promotes a profuse perspiration, and quenches his thirst. As soon as a sufficient number have come to the oven, a number of the hot stones are rolled into the middle of it, and the sweaters go in, seating themselves or rather squatting round those stones, and there they remain until the sweat ceases to flow; then they come out, throwing a blanket or two about them that they may not catch cold; in the mean while, fresh heated stones are thrown in for those who follow them. While they are in the oven, water is now and then poured on the hot stones to produce a steam, which they say, increases the heat, and gives suppleness to their limbs and joints. In rheumatic complaints, the steam is produced by a decoction of boiled roots, and the patient during the operation is well wrapped up in blankets, to keep the cold air from him, and promote perspiration at the same time. 757 515 343

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Those sweat ovens are generally at some distance from an Indian village, where wood and water is always at hand. The best order is preserved at those places. The women have their separate oven in a different direction from that of the men, and subjected to the same rules. The men generally sweat themselves once and sometimes twice a week; the women have no fixed day for this exercise, nor do they use it as often as the men.

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In the year 1784, a gentleman whom I had been acquainted with at Detroit, and who had been for a long time in an infirm state of health, came from thence to the village of the Christian Indians on the Huron river, in order to have the benefit of the sweat oven. It being in the middle of winter, when there was a deep snow on the ground, and the weather was excessively cold, I advised him to postpone his sweating to a warmer season; but he persisting in his resolution, I advised him by no means to remain in the oven longer than fifteen or at most twenty minutes. But when he once was in it, feeling himself comfortable, he remained a full hour, at the end of which he fainted, and was brought by two strong Indians to my house, in very great pain and not able to walk. He remained with me until the next day, when we took him down in his sleigh to his family at Detroit. His situation was truly deplorable; his physicians at that place gave up all hopes of his recovery, and he frequently expressed his regret that he had not followed my advice. Suddenly, however, a change took place for the better, and he not only recovered his perfect health, but became a stout corpulent man, so that he would often say, that his going into the sweat oven was the best thing he had ever done in his life for the benefit of his health. He said so to me fifteen years afterwards when I saw him in the year 1798. He had not had the least indisposition since that time. He died about the year 1814, at an advanced age.

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759 the distance of several days' journey from their homes, then they cure or dry them properly, tie them up in small bundles, and preserve them for use. It were to be wished that they were better skilled in the quantity of the medicines which they administer. But they are too apt, in general, to give excessive doses, on the mistaken principle that "*much* of a *good* thing must necessarily do much *good*."

Nevertheless, I must say, that their practice in general succeeds pretty well. I have myself been benefited and cured by taking their emetics and their medicines in fevers, and by being sweated after their manner while labouring under a stubborn rheumatism. I have also known many, both whites and Indians, who have with the same success resorted to Indian physicians while labouring under diseases. The wives of Missionaries, in every instance in which they had to apply to the female physicians, for the cure of complaints peculiar to their sex, experienced good results from their abilities. They are also well skilled in curing wounds and bruises. I once for two days and two nights, suffered the most excruciating pain from a felon or whitlow on one of my fingers, which deprived me entirely of sleep. I had re-
[757] course to an Indian woman, who in less than half an hour relieved me entirely by the simple application of a poultice made of the root of the common blue violet.

752 Indeed, it is in the cure of external wounds that they particularly excel. Not only their professional men and women, but every warrior is more or less acquainted with the healing properties of roots and plants, which is, in a manner, indispensable to them, as they are so often in danger of being wounded in their engagements with the enemy. Hence this branch of knowledge is carried to a great degree of perfection among them. I firmly believe that there is no wound, unless it should be absolutely mortal, or beyond the skill of our own good practitioners, which an Indian surgeon (I mean the best of

2:Newcomb E-4, 5 (1951-1952) 1956
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Curing

Although most serious ailments were treated magically by shamans, there was a considerable body of knowledge concerning various herbs, roots, and decoctions of one sort or another that did have a beneficial medicinal value. It should also be noted that wounds and external injuries were successfully treated.[85] This practical medicinal knowledge was the property of both ordinary individuals and shamans. Many of the curative practices, both magical and otherwise, were directed at the spirits, rather than derived from a real knowledge of physiology and pathology. This, of course, did not decrease the beneficial (or harmful) effects of the various remedies.[86]

Roots, herbs, and bark, particularly oak, walnut, cherry, dogwood, maple, and birch, were used as medicines.[87] These materials were prepared and compounded in a number of ways, and the knowledge of them was a closely guarded secret, passed on to one's children only when the owner was at death's door.[88] This secrecy remains, and my informants refused to do more than hint at the nature of their medicines. Emetics, blood letting, and perhaps cupping were common remedies in the eighteenth century.[89] The most common medicinal practice was sweat bathing. Men used the village sweat bath more frequently than did the women, who had their own.[90] A sweat bath was taken by an individual when he was tired or had contracted a cold or did not feel well. Men usually took one or two a week; women took them less frequently. Occasionally, a shaman would take a sweat bath while his patient lay outside, and frequently various medicines were taken during or immediately after a sweat bath.[91]

Folklore

Knowledge of Delaware folklore is imperfect and incomplete. The purely secular tales are little known; however, I obtained a few in the field. The mythology dealing with supernatural beings is only slightly better known. R. C. Adams published a number of tales current in the late nineteenth century; none of the stories he related was told to me.[92] The earliest origin story was obtained by Dankers in the seventeenth century, who had directed some questions at an old man of the Hackinsack division of the Unami:

[85] Van der Donck, 1909, p. 301; Thomas, 1912, p. 340; Zeisberger, 1910, p. 15. Tantaquidgeon, 1942, described medical practices and materia medica of the Delawares. Mahr, 1951, has summarized the early data on Delaware herbalism and healing; Mahr, 1955, has studied nonesoteric herb lore.

[86] Heckewelder, 1881, p. 224.

[87] Penn, 1882, p. 244; Zeisberger, 1910, p. 35; Heckewelder, 1881, p. 224; Luckenbach, 1938, p. 376; Tantaquidgeon, 1942, pp. 24-37.

[88] Zeisberger, 1910, p. 24; N.D.

[89] Zeisberger, 1910, p. 26; Heckewelder, 1881, p. 225.

[90] De Vries, 1909, pp. 217-18; Zeisberger, 1910, p. 26; Heckewelder, 1881, p. 226.

[91] Zeisberger, 1910, p. 26; Heckewelder, 1881, p. 225; O.A.

[92] Adams, 1905.

2:Newcomb E-4, 5 (1951-1952) 1956
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*177 795 although they have many Indian friends of other tribes. Any Indian can participate in peyote meetings, and a few people can hold one, whereas the Big House Ceremony requires a large co-operative group of people. Associated with the advantages of peyotism is the fact that the Delawares are even more scattered than they were during the war and would have a difficult time getting together for a twelve-day Big House Ceremony. The disintegration of the Big House Ceremony is regretted by many Delawares, but nothing is being done, or can be done, to revive it.

It is not entirely clear when most other elements of Delaware religion disappeared or were replaced. The reason for this is that no other ceremonies were as universal or as well known as the Big House Ceremony. Nevertheless, it is possible to make estimates which probably are reliable.

*177 787 Vision quest.—The Delawares no longer seek visions, and apparently few people have unsolicited visions. Informants frequently claim that "no one can have visions because the earth is no longer clean" (M.B.), or that one has to be "morally clean" to obtain a vision (N.D.). Few people living in a white man's world can claim these virtues, informants add. No young people were encountered who had had visions, solicited or otherwise. Several middle-aged and old people claimed to have had visions, but their visions had not been solicited. The guardian spirit of one informant (R.W.), for instance, was the Mask Being. This deity had appeared when the man was in delirium following an automobile accident. The vision quest was probably declining in popularity before the Cherokee-Delawares reached Oklahoma and shortly thereafter disappeared entirely. Supernatural beings encountered in a peyote trance are not regarded as guardian spirits.

*177 515 Sweat bathing, Shamanism.—Sweat bathing disappeared among the Cherokee-Delawares during the early decades of this century. O.A. was given a sweat bath as a child, as a cure for some childhood illness. Shamans often presided over sweat bathing, and the last Cherokee-Delaware shaman (Chief Elkhair) died almost two decades ago. M.B. of the Anadarko Delawares claimed that sweat baths were in vogue there until "a few years ago."

*177 757 Curing.—Although shamans and sweat bathing have passed into oblivion there is still secular knowledge and perhaps use of native medicines and cures. These are useful in love, for fevers, hiccoughs, colic in children, and the like. One informant (N.D.), for example, had inherited from her mother some sort of animal foot plus rules and ritual which were used as "love medicine." N.D. used this magical device once successfully, but is reluctant to use it again. It is doubtful if she will pass these secrets along to her daughter. Peyote, government doctors, and hospitals seem to have supplemented native therapy — medicinal and supernatural — for more important illnesses.

*177 796 Doll Dance.—According to Kinietz, "The Doll Dance which was a family responsibility has not been held since 1929."[9] This agrees with my information, although the last remaining doll owner had vowed to

[9] Kinietz, 1946, p. 14.

3:Zeisberger M-5 (1767-1780)1910
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one present draws a few whiffs of smoke and this is called smoking the peace-pipe. 276

There are four kinds of clay. There is the white, which is almost like chalk and with which, when dry, one can write as with chalk.[140] Another variety is quite black. This, however, becomes quite white when burned. Besides these, gray and yellow clays are found. A sort of yellow earth, rather of an orange tinge is found, of which the Indians, especially the warriors, make a fine color by burning.[141] With this they paint themselves and they are particularly careful that the head shall be always red. It is not too much for the Wiondats to come here to Tuscarawi, a distance of at least a hundred miles, to supply themselves with this red coloring matter. 135 [386] [301]

Concerning plants and roots of medicinal virtue, it would be possible, if one were to devote himself to inquiry, to secure a great deal of information from the Indians, for what one of these does not know another does, each man and woman having some knowledge in this direction, some more, some less. Hence, the custom that a patient who has consulted an Indian and secured a medicine from him without, however, being benefited, will go immediately to another; if no relief is obtained through his advice, the patient goes to a third, a fourth until he finds one whose medicine helps. For many ailments they have very good remedies, e. g., for rheumatism. In respect to this affliction I have witnessed instances where they have effected a thorough cure and not only once or twice. At times they can secure desired results with only two or three kinds of roots, at other times more are required. If a simple remedy does not afford relief, they may use twenty or more kinds of roots. Even in such cases I know of cures having been effected. In treating rheumatism, bathing and sweating play a great part. 757 278

They have remedies even for fevers. When a patient has been given a dose, they are generally able to tell from its workings whether he will recover or die. If he does not retain the medicine, this is regarded as a sign that he will hardly recover. I have paid some attention to this and like cases of treatment and found that the Indians have generally been correct in their

3:Zeisberger M-5 (1767-1780)1910
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● 757 278 predictions. In one important respect, according to my opinion, they make mistakes, namely, in not properly measuring doses and often needlessly torturing patients. Hence, it is that in connection with the external hurts, where over-treatment is less likely to occur, they have the better results, as is the case with rheumatism, for which they use only external applications. One Indian knows of good remedies for one disease or kind of injury, another another. Owing to the fact that they rarely reveal their knowledge to each other, much of the practical knowledge is lost.

In the matter of diseases peculiar to women, the women know a number of remedies, which usually act quickly and well, as in the case of hard labor, which sometimes occurs, though not frequently, and in other troubles. If mothers cannot suckle children for want of milk, they are able, by use of a drink, to increase the supply.[142]

278 In the use of poisonous roots the Indians are well versed, and there are many melancholy examples where they have by their use destroyed themselves or others. If a case of poisoning is taken in time, the effect of the poisonous root may be prevented by inducing vomiting. In case assistance is rendered too late, death follows, as a rule, in a few hours. There are poisonous roots that operate by slow degrees, in some cases illness may last a year or longer.

137 The so-called Poison Vine[143] grows plentifully in the bottoms. It climbs up the trees, much as a grape vine will, the main stem becoming as thick as an arm. Some are affected with swelling in the face and body if they touch it, others, even when the wind blows over it upon them. This is very painful until cured. Others do not suffer from the vine at all. This holds good of Indians as of others.

There are some poisonous trees.[144] These do not attain great height. They have a milky juice under the bark which is very poisonous.

278 757 824 The bark of many different kinds of trees is used by the Indians for preparing medicine. Occasionally, you will meet an Indian who has knowledge in this kind of remedies, but knows nothing of roots or herbs. With the white walnut bark,[145]

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With the white walnut bark,[145]
used externally and internally, they effect many cures. Laid upon flesh wounds this relieves pain at once, prevents swelling and accelerates healing. Applied externally in case of tooth-ache, head-ache or pain in the limbs, this brings speedy relief.

Beyond question there are many roots and herbs not found in Europe; perhaps it would be safe to say that this is true of most here found, but as I am no authority in this subject and know no names, except perhaps the Indian designations, I will add nothing further about roots and herbs. Doubtless, there are books from which one might get more information than it is in my power to give.

The following quadrupeds are to be found along the Ohio: In the first place, there are the deer,[146] whose skins are much used in barter and trade by the Indians. Their horns are not straight, but bent toward each other and have prongs. From May until September they are red, after that they lose the red hair and their hide is covered with long, gray hair, which is their winter coat. At about the beginning of the year they shed their horns; new ones grow in spring. These are at first and until they attain their full size, covered with a thin skin, which peels off when the horns harden. The tail is about a foot long and stands up straight when they run. As the under side of the tail is white it is possible to see them running at a great distance. The young are born in June or about that time, are red, spotted with white, until in the fall when they become gray. Deer have young each spring, sometimes two. As, however, they are hunted so persistently at the call of trade, their numbers diminish with each year, even though the forests are of vast extent, for the hunters are many. A large buckskin is valued at a Spanish dollar; two doeskins are regarded as equal in value to one buckskin.[147]

The bear is quite black, has short ears, a thick head and quite a sharp snout.[148] It has but a very short tail and great strong claws on his feet. It can easily climb the trees and bring down chestnuts and acorns. This is done, however, only when these are not ripe and do not, therefore, fall down. They generally break off the branches, throw them down and then climb

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821 ine the thunder to proceed from the crowing of a monstrous turkey-cock in the heavens. For certain stars they have names. The north star is called Lowanen, that is, north, or it is called the star that does not move. The wagon which revolves around the North Star they call the Bear, whom, they say, the Indians pursued with a little dog, that is the star Wilis; the three stars in the form of a triangle, represent the head of a bear, which they cut from the trunk and threw down. Certain stars forming an ellipse they call the beaver-hide, because they describe the form of a beaver hide stretched out. The milky way is the road to Tschipey Hacki. The seven stars[sun] they have named Anschisk-tauwewak, that is fire-brands gathered or laid together. The Monsys (Monseys) call these stars Menhangik, the travelling companions. Other nations have yet other names for them. In case of an eclipse of sun or moon, they say that these bodies have fallen into a swoon.

755 In time of illness, they try all manner of remedies, for they have a great fear of death. They not only consult the doctors, but take, also, the medicine that others may prescribe. The doctors must be called in, for if they were slighted, the patient might die. The doctors blow upon the patients, sprinkle a drink of roots and herbs they have taken into the mouth upon them, and murmur incantations over them. They diagnose the disease, tell whence it came and inform them whether recovery is possible or not. They give directions, also, as to what must be done and what kind of sacrifice must be brought. They prescribe some sort of Beson prepared from herbs and roots, of which they know the properties very well. It has happened that many doctors have been consulted in a single case, have perhaps given up all hope of recovery, and yet the patient became well.

● 757 [824] For headache they lay a piece of white walnut bark on the temples, toothache is treated by placing the same kind of bark on the cheek over the tooth that gives the trouble. The bark is very heating and burns the skin in a short time, often affording relief. The same bark is applied to any of the limbs that may be afflicted, having the effect at times of driving the pain from one part of the body to another, until there is an eruption 752 somewhere. This bark pounded fine and boiled to the con-

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sistency of a strong lye stops the flow of blood when applied to a fresh wound, even though an artery may have been ruptured, prevents swelling and heals the wound rapidly. After this solution has been used for one or two days other roots must be applied, such as the great sassaparilla and others that have healing powers.

Epilepsy is not very common among the Indians. It does not often happen that an Indian becomes mad, and madness among these people is not as violent as among the whites, probably, for the reason that they are not possessed of equal power with the whites, and even their bodies are weaker because they have not the abundance and variety of nourishing food. Blood letting is supposed to help the epileptics.

Of small-pox they knew nothing until some of them caught the contagion from the Europeans. Most of them died before the small-pox properly appeared. They are much inclined to boils and sores. Upon these they lay a warm poultice made of the flour of Indian corn; when the boils are ripe they are lanced. Broken arms and legs they are able to set very well, though limbs are not broken often, dislocated joints they are also able to correct. If an Indian has dislocated his foot or knee, when hunting alone, he creeps to the next tree and tying one end of his strap to it, fastens the other to the dislocated limb and, lying on his back, continues to pull until it is reduced. For tooth-ache the Indians use roots also, placing a little piece in the hollow tooth, which sometimes affords relief though not always. Sometimes teeth are extracted if a pair of pincers can be secured. It is not for lack of skill but for lack of proper instruments that they do not treat external injuries more successfully. Such instruments as they have are not used in the most careful manner. If one who is being operated on cries out, those present laugh. Misfortunes of almost any kind trouble them little; if house and goods have been burned, the unfortunate owners may even relate the experience in a humorous manner.

Many of them suffer from diarrhoea, particularly, in the fall of the year. The evil is aggravated because they know nothing of dieting and continue to eat whatever they wish. For

3;Zeisberger M-5 (1767-1780)1910
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757 this and for other troubles they have roots and herbs, which generally prove efficient remedies. Knowledge of these remedies may be confined to a very few, who demand payment for any prescription they make and keep their secrets to themselves. One common mistake made by all Indian practitioners is overdosing the patients. Fortunately, the Indians have strong constitutions, and usually do not suffer permanent injury from the unwise treatment of their doctors.

765 Concerning mourning for the dead it might be added that a widow is expected to observe in externals the following rules during the period of mourning which lasts a year. She must lay aside all ornaments, wash but little, for as soon as she makes pretensions at cleanliness, combs and dresses her hair, it is reported that she is anxious to marry. Men who are in mourning have no such regulations to observe.

Should a chief have lost a child or near relative, no complaint may be brought before him, nor may his advice be asked on any affairs of state. Even important embassies from other nations cannot be attended to by him until comfort has been formally offered. This is commonly done by delivering a string or fathom of wampum and addressing to him a speech, in which figuratively the remains of the deceased are buried, the grave covered with bark that neither dew of heaven nor rain may fall upon it, the tears are wiped from the chief's eyes, the sorrow of burial taken from his heart and his heart made cheerful. This done, it is possible to confer with him on the matters of state that need consideration.

When Europeans, who are in more comfortable circumstances than the Indians, wish to comfort a chief, they not only give a string of wampum but wrap the corpse of the deceased in a large piece of fine linen, laying another piece on the grave and wipe the tears from his eyes with silk handkerchiefs. Both the linen and the silks are given him as a present.

766 When a chief dies sympathy is expressed with the whole
648 nation. I will give a brief description of the ceremonies observed when the Cherokees sent a formal and numerous embassy to the Delawares in Goschachgünk to renew their alliance with

groups although possessing its own ethnic individuality, still overlaps in certain respects. And where the practices and beliefs of many tribes reveal similarity to the folk remedies of Europeans in the New World, the problem of interpretation of properties is made extremely complicated. Realizing that many of the plants and weeds are migrants from Europe to the New World, we shall have to proceed with caution in view of the fact that the Indians had an ample native pharmacology of their own before the period of conquest, and that an experimental spirit was always and everywhere active in revealing new cures among the invading plant hosts. It will, therefore, not be an easy task to distinguish between what is Indian and what is European, until we can assign the concepts and practices to one or the other.

No one, I believe, would deny that there has been much borrowing, as it is called, on the part of the Colonial whites from the Indians as a glance at the voluminous contents of the United States Dispensary (1926) will reveal. In the north this process was initiated by the French who accompanied Cartier (1906, pp. 73, 77) and who would have perished from scurvy, had it not been for the therapeutic knowledge of those Algonquin or Montagnais who supplied them with an effective medicine concocted of white cedar bark. Subsequent to this reference in the early documents many others are encountered indicating a deep-rooted system of primitive medicine which was, as it should be, partly pharmacological and partly psychological.

The Delaware system of health protection and disease curing seems to be a blend of what students of comparative medicine have agreed in calling primitive religion and science. In Delaware the sophistry and the performances of healing are religious while the knowledge applied in these processes is scientific. And yet where the action of the herbs, if not other substances, is mechanical or chemical, there is always the dependence upon the spiritual power of the healer with the deep emotional attributes from which the Delaware mind is never free when operating in these channels of thought. There has been, however, a certain element of hard-headed and non-magical experimentation blended together in the development of the herbal cures, at least from the point of view of native method. For the observation of repeated success with some remedies and failure with others has not escaped the attention of the native doctor. Conversations with Wi·tapanóxwe and the herbalists of other tribes have made me aware frequently that selective judgment was combined with past experience in the profession. To deny this would be to discount the mental stature of these men of thought and study to a degree that would bring a smile to the person who has had intimate associations with the native doctors among any of the eastern tribes. Like students of other professions they comprehend the unlimited bounds of knowledge and are ever seeking for additions to both pharmacopeia and technical or magical theory. And the test of efficacy is present in their disciplines even though the test is

judged by the results of treatment rather than by the science of composition. I might compare it, in some respects, to the tenets of Christian Science without, I hope, doing too much injustice to the basis of this much favored school of reasoning. The Delaware would offer an instance of the powerful influence of religious beliefs upon professional technique, cited by Kirkpatrick (1929, p. 249) and elaborated by Boas (1929), Goldenweiser (1922) and Lowie (1924b) among American students of the subject. Here, however, lies an extended field for investigation which in no manner depends for its development upon Delaware data but in which, I hope, this material will find a place as illustrative of the status of magical science and religion among one of the eastern Algonkian tribes.

That the Delaware of today are not so different from their forebears of two centuries ago as regards ability to treat cases that baffle their rivals of the European profession, is shown by a statement in 1698 of Gabriel Thomas (1912, pp. 323, 340) who said, "The Indians are able doctors and surgeons as any in Europe, performing celebrated cures therewith." From the account written by Heckewelder (1876, p. 229) we have the following testimony. "I, myself, have been benefited and cured by taking their emetics and medicines in fevers, and by being sweated after their manner while laboring under a stubborn rheumatism. I have also known many, both whites and Indians, who have with the same success resorted to the Indian physicians, while laboring under diseases .. . I firmly believe that there is no wound, unless it should be absolutely mortal, or beyond the skill of our own good practitioners, which an Indian surgeon (I mean the best of them) will not succeed in healing." Zeisberger also refers to their ability to treat successfully different maladies, especially diseases peculiar to women. As for the present my informant lays claim to the curing of thirty-two persons during his sojourn in Philadelphia, for which he received no more regular compensation than voluntary gifts from persons of the underprivileged classes.

In assembling the botanic material presented here, specimens of plants were gathered in the wider Philadelphia area in company with my informant who explained at length their medicinal properties and uses. This collection was later supplemented by a few plants sent me by Wi·tapanôxwe from his home in Oklahoma. From time to time such specimens were submitted to Dr. John M. Fogg, Department of Botany, University of Pennsylvania, who very kindly checked their scientific identity. At the conclusion of the investigation a complete list of plant specimens was sent to M. R. Gilmore, University of Michigan, for comment of an ethno-botanical nature.

In the text, bibliographic citations are indicated by the author's name and the date of publication, to permit ready reference to the bibliography.

[p. xii is blank]

Bear and that woman, Small Person, to forget their troubles.[19] Because, Grandmother, it has been many years that they have been together. Again, Grandmother, I implore you because it is right that they should love each other henceforth. If you accept my plea, in two days from this time the woman will go back."

The second variety of magical root, termed "pull up," is employed in the following manner. The informant's maternal grandfather transferred to him the secret of such a medicine gift in order to control human beings or animals. Although the root is intended primarily for use in hunting, it could also be employed to coerce or in general, influence people favorably. I was unable to secure a specimen of this "rare" plant for scientific identification.[20] Wi·tapanóxwe describes the plant root as having "five prongs." After securing several of the plants, the roots are prepared by cleansing them thoroughly in running water, to the accompaniment of songs and prayers. Three branches of the plant root are then broken off and another, taken from the root of a plant of the same species, attached to the remaining two, to make three. In this connection it may be noted that the emphasis upon the number three in this and the previously decribed love charm represents a symbolism for which the informant could offer no explanation.

In use, a small quantity of the prepared root is chewed three times a day. The juice resulting from the first mastication is rubbed on the hair, that from the second and third is swallowed. Such a procedure will bring about the desired result in a short time. To lure game animals some of the root is chewed while hunting. Wi·tapanóxwe related an incident of holding some of these roots in his hand while singing his medicine song, and thus luring a squirrel very close to him. The root is so powerful that if an excessive amount of juice is swallowed, the person's mind will become affected.

Food Taboos

After he has diagnosed the case, the practitioner prescribes a curative diet[21] for the patient, the food restrictions being determined by the

[19] "Being in trouble."

[20] This is probably due to the supposed magical properties attributed to this plant, making it dangerous, according to Delaware belief, for persons other than practitioners to handle it. This applies to all other plants used for magical purposes.

[21] Barber (1856, p. 538) quotes the following from William Penn's letters: ". . . if they eat flesh it must be from the female of any creature." Also see Zeisberger, *op. cit.* p. 24.

nature of the disease. The flesh of animals and fowl is excluded from the diet and in the case of fever, red or fox squirrel flesh is not eaten. This food taboo is known to the Delaware by a native word meaning "makes you sick." Corn hominy, however, is administered in most cases, as it is considered to be a nourishing food.

In the case of childbirth, salt is not eaten for ten days. Onions are given the mother to produce milk, but care must be taken not to use a quantity such as to cause nausea for the child and mother.

During the catamenial period a woman is not allowed to prepared food nor taken an active part in domestic affairs.[11] The separate dishes assigned to her at that time, may only be used by her husband. Food cooked by such a woman would produce tuberculosis in others in a short time. A term translated as "gives dirty food," is applied to such a practice and refers to the resultant poisonous effects. During her periodic isolation a woman herbalist must refrain from preparing remedies or participating in any of the ceremonies.

Divinatory Curing Practices

Certain acts of a divinatory nature are performed upon selection and preparation of plants, roots, and bark employed in making medicine. Only plants that are clean and well developed, with the roots free from knotty growths, are taken. When seeking bark, the medicine gatherer selects a sturdy, well-formed tree for the purpose. The bark growing on the east side of a tree is preferred for its greater strength-giving properties received from the morning sun.

In gathering medicinal supplies, the materials are inspected for a clue as to the course of the treatment. Thus, if roots appear rough and knotty, the patient will be difficult to cure; if clean and well-formed, it will be an easy task to restore his health. Another practice is to place some crushed leaves or roots in running water. If the substance sinks to the bottom of the stream, the patient for whom it is prepared, will die; if it floats, a speedy recovery is assured.

When all other remedies have failed, an emergency medicine is sometimes made from scrapings of deer antler. During its preparation a prayer is offered to the animal from which the antler was obtained. Witapanóxwe related an incident in which a trial was made by means

[11] The puberty ceremony for young girls and the periodic isolation of women is described by Zeisberger, *ibid*, pp. 75-77.

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team of horses which had broken through the ice, were rescued through this same ability, to remain beneath the surface of the water for a considerable period. Power for this ability was given him by a teal duck which appeared to him in a dream. In the informant's words:

> When a boy, my grandfather always went swimming every morning before sun-up, even when there was a thin coating of ice on the river. One time he dreamed of going down to the ice-covered stream very early to bathe as usual. When he jumped into the water the echo could be heard down the river. Then suddenly he heard a voice saying to him, "I am going to make you a strong man. You will be able to go under the water as I do." He did not see anyone around but there close by was a teal. And he could go down under the water and get fish, too.

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So close was the connection of divination with the spiritual realm that the Delaware noted carefully the last words of a person near to death. At such a time the dying one is believed to be in close communication with the souls of the departed, who may impart messages of great importance through this medium to the living. One aged woman while on her death-bed spoke as follows:

> My kindred, we have been wonderfully blessed. We have enjoyed the gifts which the Creator bestowed upon us. That is because we have kept our own religion and observed the teachings of our elders in all things. If you continue to do this in the future, you will not be subjected to the evils which increase as civilization increases. Do not give up your own religion.

Another old woman foretold the coming of the railroad twelve years prior to its appearance, while a third foresaw the granting of citizenship to the Indians twenty years before its occurrence.

The Sweating Rite

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The importance of the sweat lodge ritual, as carried out by the Delaware for the purpose of spiritual and physical purification, is attested both by early observers,[25] and by more recent students.[26] According to Zeisberger, in his discussion of Delaware customs, the practice was attended by rather elaborate rites and was evidently regarded as one of the major ceremonies. It was performed in honor of fire, being called *machtuzin*, a term meaning "to perspire," according to the same writer's translation. A similar rite is described by Harrington, whose informants named it *muxhat'olzing*. This is recorded as a variant of the Annual Ceremony.

[25] Zeisberger, *op. cit.*, p. 138; Heckewelder, *op. cit.*, p. 225; Loskiel, 1794, pt. 1, pp. 108-9.
[26] Harrington, 1921, 122-126; Speck, 1931, pp. 72-74.

In examining the various accounts of this rite, both in published and manuscript form and through correspondence and verbal statements, it is evident that what was originally a highly developed ceremony performed in honor of the Creator, to whom appeals were sent through various media (such as fire, tobacco, water, etc.), has been modified to a great degree by the introduction of alien features and the abandonment of certain elements to meet the requirements of individuals. The latter would apply both to the practitioners and to those who sought treatment for physical and mental ills.

The benefits, according to one early writer (Heckewelder, *op. cit.*, p. 225) which were derived from the sweat lodge ritual, were numerous and varied. He writes: "The sweat oven is the first thing that an Indian has recourse to when he feels indisposed: it is the place to which the wearied traveller, hunter, or warrior looks for relief from the fatigue he has endured, the cold he has caught or the restoration of his lost appetite." Reference to the works of Zeisberger [37] and Loskiel [38] indicate that it was customary for individuals to resort frequently to the public sweat lodges.

Wi·tapanóxwe states that formerly the sweating rite, as a part of the annual Big House Ceremony (Speck, 1931, p. 74), was performed to test the spiritual and physical strength of certain men, usually warriors. A lodge was built within the Big House and the men went in to pray and to recite their visions. Those who could withstand the heat for the longest period, were regarded as possessing the greatest power for war, and for curing. Information (correspondence, November, 1930) of a negative character as to the ceremonial aspects of the rite was obtained from J. A. Parks, of Copan, Oklahoma, who writes, "The sweat lodge was not a ceremony. It was a method of treating the sick with sweat baths and hot breaths of air by the Indian doctors."

This brings us to a consideration of the rite as it is performed by the Delaware sweat doctor today. In the account dictated by Wi·tapanóxwe, there is evidence of the survival of many elements, originally attached to the earlier form but subsequently incorporated into the formal pro-

[37] "It is the custom of the Indians when they are tired or caught cold to go into a sweating oven several times a week. For this purpose every town has on its outskirts a sweating oven." (*op. cit.*, p. 26.)

[38] Similarly, this writer (*op. cit.*, p. 661) states in reference to the Delaware that "In every town an oven situated at some distance from the dwelling is built either of sticks or boards covered with sods, or dug in the side of a hill, and heated with some redhot stones."

757 cedure within the lodge for the purpose of diagnosing and treating sickness.

756 The term applied to the sweat house healer is one meaning a "sweat
757 doctor." He always performs within the lodge when asked to examine or treat a patient. It is interesting to note that my informant, Wi·tapanóxwe, and Charley Elkhair, the present head chief of the Oklahoma Delaware, claim the distinction of being the only men among the Oklahoma Delaware who have supernatural sanction to perform in this capacity. The former believes that he is privileged to assume the role which his people consider appropriate only for men whose mind and character have been strengthened by years of experience but that up to the present time (1930) he has not attempted it. The powerful shamans [29] of an earlier period were said to have been able to perform miraculous feats and effect marvelous cures without the aid of the sweat lodge although it was frequently employed in their practices.

787 Both of the above types of medicinemen receive their power from
756 the Creator through dream-visions, the spiritual visitation occurring
759 usually just before sunrise or sunset. The vision is accompanied by a medicine song which becomes the personal property of the healer, to be sung during performances in the sweat lodge. It is said that women rarely became sweat doctors. Wi·tapanóxwe, since his vision and medicine song were received just before sunrise, considers that as the time of day during which he would be most successful in curing activities within the sweat lodge. Those who received their power at sunset accordingly regarded that as the most suitable time for performances.

Contrary to the herbalist's custom of not accepting gifts or payment for his services, the sweat doctor expects payment from those who approach him for consultation and treatment. In former times trader's trinkets, etc., and somewhat later, horses, blankets, and money were given by those requiring his services.

343 The construction and equipment of the sweat lodge are matters of considerable importance in this particular type of curing. It is built of twelve poles which represent the twelve levels of heaven (Speck, 1931, p. 74) and according to native belief, lead to the abode of the [772] Creator. For this purpose saplings chosen for their flexibility, are cut

[29] In Delaware the term used means "powerful man," "man who can heal," and refers to a type of shaman, called *medeu* by the Delaware of an earlier period, especially concerned with curing. Among the Chippewa (Densmore, 1929, pp. 86-97) the *mide* were the leaders of the *mide'wiwin* or Grand Medicine Society. See also Hodge, 1912, p. 523.

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into lengths averaging from six to eight feet. The end of each of these poles is pushed into the ground to form a circular outline, five or six feet in diameter, with a somewhat wider space marking the entrance towards the north or south. The opposite ends are then bent over and lashed down to form a dome-shaped structure, over which skins, mats or blankets are laid. The fire, located in the lodge center, is built of twelve logs of hard wood. Neither driftwood nor wood obtained from a tree struck by lightning are suitable for this purpose. The use of the former, known as "gathered together by water," would tend to cause a flood. Fuel taken from a tree struck by lightning, is termed "thunder burned wood"; its use in the sweat lodge, thus angering the Lightning Spirit, would cause a severe storm.

The native doctor may employ any person to assist in building the fire, carrying rocks and water, or arranging mats of Indian hemp and bark for the pallet upon which the patient is laid. The latter is covered with skin robes or blankets so that only his head is exposed. After the fire has burned down sufficiently to form a bed of coals, more logs are added and the rocks, usually limestone, brought in. Twelve stones of medium size are placed in the fire. For handling them, a branch of hickory or any hard wood, about five feet long, is split at one end for use as a fork. After the rocks have become thoroughly heated, water is poured over them to produce steam. The doctor prays and sings for a period of time determined by the nature of the sickness and the strength of the patient. His song at this time is the narration of his dream-vision experience made as an appeal to the Creator and his supernatural guardian. Although the emphasis in this type of treatment is upon mental suggestion, in some instances tea made of herbs is administered by the doctor.

In addition to the lodge, poles, fire logs, and steam rocks[89] grouped in units of twelve to conform with the twelve levels of heaven, symbolical significance is also attached to fire, water, and stone. These are regarded as minor deities, often referred to in terms of human consanguinity (Speck, 1931, p. 32), possessed of great healing

[89] Brinton (1888, p. 37) in writing of the survival of curing rites among the Ontario Delaware, states: "I enquired in particular if there are any remnants of the curious adoration of the twelve sacred stones described by Zeisberger. I found that the custom of the sweat lodge still prevails. The steam is generated by pouring water on hot stones. This is done by the medicine man who is known as *Quechksapiet*. He brings in one stone after another and pours water on it until it ceases "to sing" and invariable he uses precisely twelve stones."

776 power. Besides its specific name, the term, "our Grandfather," is ap-
778 plied ceremonially to fire. Rocks are also known as "our Grandfathers." Water is regarded as a powerful spiritual force and is known as "our Mother."

●757 Some cases of illness can be cured in one treatment while in others it is necessary to hold several meetings in the sweat lodge. The latter is known by a term meaning "temporary sweating." New stones are secured for each treatment. It is considered advisable to let one or more days elapse between treatments, as determined by the physical condition of the patient. The latter is occasionally massaged by the doctor, who first warms his hands upon a hot stone before rubbing the affected area. Often it is necessary also for the healer to [755] blow hot or cold air upon the patient. For the first the shaman's breath is warmed by means of a hot drink. In Delaware terminology this is known as "warm breath." In case of fever or exhaustion the "cooling breath" is used. One doctor had so much supernatural power in this respect that his breath would cause a swelling wherever it struck the body. It was therefore necessary for him to exercise great care in this type of treatment to avoid bringing undue discomfort to the patient.

795 Following the ritual performance in one of the Delaware peyote
515 cults, it is customary at the present time for the participants, both men and women, to go into the sweat house (Petrullo, 1934, p. 95). This usually occurs before sunrise. The sweat house for this assemblage accommodates about twenty persons. The equipment is precisely the same as for the performance previously described, but there is no ritual connected with this performance. Men and women enter together and drink hot water to induce perspiration. In case of nausea, they chew "Osage tobacco" (wild sage) and swallow the juice. This plant, according to my informant, has a very strong taste together with astringent qualities. The sweating period is followed by a plunge.[31]

[31] This is comparable to the semi-social aspect of the rite as described by Heckewelder, *op. cit.*, pp. 225-226. "These sweat ovens are generally at some distance from an Indian village where wood and water are always at hand. The best order is preserved at those places. The women have their separate oven in a different direction from that of the men, and are subjected to the same rules. The men generally sweat themselves once and sometimes twice a week; the women have no fixed day for this exercise, nor do they use it as often as the men." He also states: ". . . A cryer goes his rounds calling *pimook*, 'go to sweat.' Everyone brings his small kettle which is filled for him with the potion which at the same time serves him as a medicine, promotes profuse perspiration, quenches his thirst."

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CURATIVE PRACTICES AND HERBAL REMEDIES

HERBAL REMEDIES recorded here may be divided arbitrarily into two groups—the simple and the compound. In the former group, one, two, or three different plant parts are mixed together as contrasted with those remedies of the second group which includes from seven to twenty vegetal substances, according to the specific sickness encountered. My informant stated that "man needs medicine made from many different plants to act upon his bodily organs, afflicted by the ills from which he suffers." Frequently Witapanóxwe uses as many as fourteen different plant substances in making up certain medicines, while other herbalists are said to compound theirs from seven or more elements.[1] Thus we may cite the predominant occurrence of compound remedies among the Delaware in contrast to the simple remedies of the eastern and northeastern Algonkians (Speck, 1917).

The bark preparations noted immediately below are called "single" (simple) remedies by my informant, and are employed as a cathartic. In preparing and administering these medicines, the correct procedure should be carefully followed in each case. To avoid nausea, bark is customarily removed from smaller twigs and branches rather than from those of larger size. In the preparation of 1 b, c, d, and e, the branches are not roasted as in 1 a.

1. (a) BLACK WALNUT *(Juglans nigra)*, "round nut tree." Three slender branches are roasted in the open fire. The bark from each is then removed, by peeling from the tip end[2] and tied in separate bundles. A strong tea is made by boiling these three bundles of bark together and large draughts taken occasionally. To remove bile from the intestines, the treatment is continued for two days. The leaves are scattered about the house to dispel fleas while the sap is a good application for any inflammation. Juice from the green hull of the fruit is rubbed over the infected area to cure ringworm, "contagious skin disease."

[1] The native use of twelve different medicines which cause one to vomit and "thus remove his sins" is mentioned by Zeisberger, *op. cit.*, p. 134. Elsewhere (p. 35) he states that occasionally the Indians are able to effect a cure with only two or three kinds of roots. If a simple remedy does not bring relief, twenty or more are used.

[2] To cause vomiting, the bark is peeled upward on the branch.

(b) MULBERRY *(Morus nigra)*, "surrounding berries tree."
(c) YELLOW BIRCH *(Betula lutea)*, "yellow willow."
(d) WHITE ASH *(Fraxinus americana)*, "brittle tree."
(e) BUCKTHORN *(Rhamnus caroliniana)*, "buckthorn."

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2. HONEY LOCUST *(Gleditsia triacanthos)*, "accidentally thorned." The bark of the following species, honey locust, prickly ash, wild cherry, and sassafras are combined for a general tonic. This medicine is used for a severe cough and to purify the blood.

3. SYCAMORE *(Plantanus occidentalis)*, "shedding bark." The bark of the sycamore and honey locust are steeped for a gargle to relieve hoarseness and sore throat. Three chips taken from the east side of the honey locust and sycamore trees are steeped together with red oak bark and sweet flag root to make a hot drink for colds.

4. CHESTNUT *(Aesculus glabra)*, "big acorn tree." Nuts ground up and mixed with sweet oil or mutton tallow to make poultice for earache. A nut carried in the pocket will relieve rheumatism. Nuts ground up for use as fish poison in streams. This is known as "fish peyote," as it makes them "dizzy" and they can be caught easily.

5. SASSAFRAS *(Sassafras albidum)*. Bark of the root, together with other bark, used as a blood purifier. In spring employed as a beverage.

6. WHITE OAK *(Quercus alba)*, "gray tree." Bark is a valuable substance in Delaware medicine and is used in compounding many remedies. For a severe cough, a tea is steeped from the bark. For sore throat a stronger liquid is used as a gargle. Also makes an excellent douche; liquid used to cleanse bruises and ulcers.

7. PIN OAK *(Q. palustris)*, "black acorn tree." Infusion of inner bark given for intestinal pains. The acorns are edible.

8. RED OAK *(Q. rubra)*, "red oak." Bark is steeped to make a tea for severe cough. Will also relieve hoarseness.

9. BLACK OAK *(Q. velutina)* "bitter tree." Inner bark used for colds and hoarseness. Infused for tea and gargle.

10. REDBUD *(Cercis canadensis)*, "red bud." Bark steeped in cold water for a drink to reduce fever and stop vomiting.

11. Cottonwood *(Populus deltoides*, or *Sargentii)*, "tree with moving leaves." Bark from the black haw, wild plum, and cottonwood are combined to make tea for weakness and debility in women.

12. Black Haw *(Viburnum prunifolium)*, "berries-in-sight tree." Bark taken from the root is combined with leaves of bloodroot, wild plum, pearly everlasting, "stone root" and bayberry to make a tonic to strengthen the female generative organs.

13. Elm *(Ulmus americana)*. Inner bark steeped and liquid drunk for colds and severe coughs.

14. Dogwood *(Cornus florida)*. The root is combined with others to make a tonic. In another variety *(C. canadensis)*, "arrow wood," the bark is combined with that of other species to relieve body pains.

15. Peach *(Prunus persica)* leaves are infused to expel pin worms and to stop vomiting in children. A small quantity is sweetened and is drunk occasionally until relief is felt.

16. Holly *(Ilex opaca)* is designated as the "red berry tree." It is believed that holly grows up near the place where a person was frightened. If one became suddenly frightened, he remarks, "I guess holly will grow here because I was scared so badly."

17. Grape *(Vitis rupestris)*. Vine is combined with bloodroot, pearly everlasting, "star root" *(sp.?)*, false spikenard, peppermint, and sarsaparilla to make a tonic for frail women. It is also said to increase fertility.

18. Fox Grape *(V. vulpina)*, "sour berry tree." Sap of the vine valuable in treating leucorrhea and when removed in spring, beneficial for the hair.

19. Elder *(Sambucus canadensis)*, "hollow tree." The leaves and stems act as a blood purifier, also used in the treatment of jaundice. From the elder flower, a tea is made for colic in infants. The bark scrapings are used in making a poultice for sores, swellings, and wounds.

20. Hops *(Humulus lupulus)*. The blossoms are employed in medicine for nervousness. A small bag filled with hops and heated is useful as an application to relieve earache or toothache. A tea made from the plant acts as a tonic-stimulant.

21. Dwarf Sumac *(Rhus copallina)*, "kinnikinnick tree." Roots pounded and applied as poultice for sores and skin eruptions. An

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infusion of the leaves is used to cleanse and purify skin eruptions. To treat venereal disease an infusion of the roots is taken. The berries are useful in making a mouth wash.

22. Wild Cherry *(Prunus serotina)*, "excrement tree." Bark used as remedy for diarrhea. Also combined with other roots and bark as a tonic. The fruit is sometimes used to make cough syrup.

23. Ginseng *(Panax quinquefolium)* is named "man and woman," a term descriptive of the human-like form of the root. The terms "Grandmother" and "Grandfather" are also given the plants, because they are usually found growing in pairs. The root is regarded as being very potent by the Delaware and may be used in treating either sex. In treating males, the "male root" is used, and vice versa. Plant is believed to have retreated, like others, before the advance of civilization and hence, is rarely found. It possesses medicinal properties which will, in many cases, effect cures where all others have failed. The root is diced in small particles, a tablespoon of which is added to a cup of hot water to make tea. The root is used with other plant parts as a general tonic.

24. "Frost" or "Ice" Weed *(Helianthemium canadense)*, was revealed to a Delaware in a dream in which the plant said, "I am strong and great. Stronger than any other plant because I remain green later in fall. Use me and you will become strong." Root used in making poultice for sore throat. Tea infused from plant taken at same time.

25. Poke *(Phytolacca decandra)*, "purple berry." The root of this plant is combined with the bark of sarsaparilla and mountain grape to make a remedy for rheumatism. It acts as a stimulant and blood purifier. In preparing the medicine, the root of the poke is first thoroughly roasted and then crushed. To avoid nausea, a small dose is customary.

26. Poison Ivy *(Rhus toxicondrendon)*, "irritating" or "blistering" vine. Not poisonous to everyone. The root contains valuable medicinal properties. A poultice is made from the roasted, crushed root. A salve effective for chronic sores and glandular swellings is made from the roots of poke (roasted), bittersweet, yellow parilla, and the bark of elder. These ingredients are placed in boiling tallow or lard, to which is added a medium-sized piece of beeswax. A more modern formula calls for the addition of one-fourth ounce of carbolic acid and two ounces of menthol crystals.

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●757 278 27. ANGELICA *(Angelica atropurpurea)*, "to mix with smoking (tobacco)." Root used for stomach disorders; seeds sometimes mixed with smoking tobacco.

28. ANISE *(Pimpinella anisum)*. Root used as a cathartic and stomach tonic.

29. YELLOW JASMINE *(Gelsemium sempervirens)*, "yellow root." Root used as blood purifier.

30. The root of STAGHORN SUMAC *(Rhus typhina)*, "Cherokee sumac" is combined with that of "horse-hobble weed" or purple cone-flower *(Brauneria purpurea)* as a remedy for venereal disease. The patient should refrain from eating sour fruit and greasy foods. Water should be taken freely and often. [262]

31. BONESET *(Eupatorium perfoliatum)*. The root and occasionally the leaves are infused as a treatment for chills and fever.

32. GOLDENROD *(Solidago juncea)*. The green leaves are chewed or infused to cure diarrhea. Also used to reduce fever.

33. WINTERGREEN *(Gaultheria procumbens)*. Entire plant is compounded with poke root, mullein leaves, wild cherry bark, and black cohosh bark *(Sp.?)* to make a tonic. Beneficial also for rheumatism.

34. BLACKBERRY *(Rubus nigrobaccus)*. The vine is combined with wild cherry bark to cure dysentery.

35. DOCK *(Rumex obtusifolius* and *R. crispus)*, "curly leaf." Root used as a blood purifier and remedy for jaundice.

36. BLACK SNAKEROOT *(Cimicifuga racemosa)*, stone root *(Collinsonia?)*, and root of elecampane *(Inula helenium)* are compounded to make a tonic.

37. GOLDEN ASTER *(Chrysopsis mariana)*. Tea made from the root to quiet infants. Also acts as tonic for sickly children.

38. "TURKEY FOOT" *(Sp.?)*, "leaves like turkey foot." Plant tip and root infused as a tea for weak women.

39. PRAIRIE MOSS *(Sp.?)*. Leaves used as poultice for sore throat. Plant infused as tea, called "tonsillitis medicine."

40. CARDINAL FLOWER *(Lobelia cardinalis)*. An important plant for the Delaware herbalist. Tea made from the root used for typhoid. Administered in small quantities because of its strength.

41. SAGE WILLOW or "RED ROOT" *(Salix tristis)*. Contains valuable medicinal properties of importance to Delaware herbalists. Tea

made from root for women suffering displacement of womb. Used, together with roots of prairie willow *(Salix humilis)*, little burr *(Dentaria diphylla)* and false Solomon's seal to make a tea to treat scrofula and venereal disease.

42. Rattle-box *(Crotolaria saggitalis)*, "blown-over weed." A medicine for venereal disease is made from the root. It is a very strong narcotic.
43. Hedge Nettle *(Stachys palustris)*, "smart weed," is combined with common nightshade, "pretty flower," and button snakeroot to make a medicine for venereal disease.
44. Purple Cone-flower *(Brauneria purpurea)*, "white flower." This is called "Yuchi gonorrhea medicine" by my informant. A tea made from this root alone will cure an advanced case of venereal disease in seven days.
45. Ragweed *(Ambrosia artemisiaefolia)*. Plant used in making a poultice to apply as a preventative of blood poison.
46. Button Snakeroot *(Eryngium aquaticum)*, "to vomit." Used as a medicine for intestinal tape and "pin" worms.
47. Horsemint *(Monarda punctata)*. A tea made of the plant for fever, and to bathe face of patient.
48. Bayberry *(Myrica sp.)*. The bark is used as a blood purifier, and for kidney trouble.
49. Sweet Fern *(Myrica asplenifolia)*. Plant is steeped and liquid applied to blisters. Also combined with mallow root, elder flowers and dwarf elder to treat inflammation of the bladder. It is also good for scrofula. Is a blood purifier and useful in removing mucus from the lungs.
50. Pipsissewa *(Chimaphila umbellata)*. The plant is steeped and the liquid is applied to blisters. It is also combined with mallow root (?), elder flowers and dwarf elder bark in medicine for inflammation of the bladder. Also for scrofula. Purifies the blood and tends to aid in removing mucus from the lungs.
51. False Pennyroyal *(Hedeoma pulegioides)*. A tea is made from the leaves to relieve stomach pains.
52. Wild Carrot *(Daucus carota)*. Blossoms picked at full bloom are steeped as tea for diabetics.
53. Yarrow *(Achillea millefolium)*. A tea is made from the plant for disorders of the liver and kidneys.

757 278

54. Prickly Ash *(Xanthoxylum americanum)*. "Bush with briars" or "little thorn bush." Inner bark steeped as medicine for heart trouble. A small quantity is taken each day for three days, and after three days, the treatment is continued.

55. Wintergreen *(Gaultheria procumbens)*. A tea made from entire plant is taken for kidney disorders.

56. Cattail *(Typha latifolia)*. Medicine made from the root to dissolve kidney stone.

57. Partridge Berry *(Mitchella repens)*. A tea is made for suppressed menstruation. This remedy strengthens the female generative organs. In the treatment of rheumatism, the "herbal steam" treatment is considered of great value. A strong infusion is made from the roots or twigs of one of the medicinal plants useful for this type of sickness. The patient is seated with his feet in a basin of the liquid, made very hot, and a blanket then wrapped around the lower part of his body. Cold damp cloths are applied to the head during the steam treatment which lasts an hour or less. The upper portion of the body may also be steamed by raising the level of the blanket. This treatment is effective in reducing muscular swellings and stiff, aching joints. The following vegetal materials are used singly in this way:

58. (a) Bull Thistle *(Cirsium lanceolatum)*, "pretty flower."
(b) Poke.
(c) "Frost Weed."
(d) "Expert remedy," unidentified.
(e) Cedar *(Juniperus virginiana)*[8] particularly the twigs.
(f) Hemlock *(Tsuga canadensis)*.
(g) Dwarf Sumac.
(h) Hop Vine.

59. Blue Flag *(Iris versicolor)*, "blue flower" or "top like calamus." Medicine made from the root is valuable for rheumatism, scrofula and disorders of the liver and kidneys. Combined with the root of sevenbark *(Hydranga aborescens)*, it is used for gall stones.

60. Great Mullein *(Verbascum thapsus)*, "gray leaf." The leaves are heated and applied to the joints and body to allay rheumatism pain and reduce swelling. These leaves are combined with coltsfoot *(Petasites palmata)*, plum root, and glycerine to make a healing

[8] Speck, 1931, pp. 47, 127, 151, 171.

syrup for catarrh, coughs, and lung trouble. In preparing this remedy, the mullein must be gathered before the plant blooms. 757● 278

61. Burdock *(Arctium minus)*, "big-leaved burr." A tea made from the root is good for rheumatism. Acts as a stimulant and blood-purifier.

62. Butterfly Weed *(Asclepias tuberosa)*, "where butterflies light." Root used as a remedy for pleurisy and rheumatism. Also administered to women following child-birth. Rattlesnake plantain *(Epipactis pubescens)* has the same term and is used in the same way.

63. Elecampane *(Inula helenium)*, "leaves like Indian cabbage." Root used in making a tonic, useful for strengthening digestive organs and to remove mucus from the intestines.

64. Toothwort *(Dentaria diphylla)*, "little burr." Root combined with other as a stomach remedy.

65. False Indigo *(Baptisia tinctoria)*. Liquid infused from root used in cleansing cuts and ulcers. Also employed as a douche. [752]

66. Jimson Weed *(Datura stramonium)*. The leaves are crushed and applied to fresh wounds as a poultice. A salve for treating piles is made by pounding the seeds and mixing with tallow. 752 757 278

67. Common Plantain *(Plantago major)*, "path weed." Leaves crushed and used as a poultice. Plant combined with other plant parts is useful in treating female diseases.

68. Climbing Bittersweet *(Celastrus scandens)*, "yellow root." Root prepared as a poultice or salve for skin eruptions. Tea made from the root will clear up liver spots.

69. Skunk Cabbage *(Symplocarpus foetidus)*. A tea made from the root is useful in treating whooping cough. The leaves are crushed and used as a poultice to allay pain. People suffering from epilepsy often roll up a small portion of the leaf and chew it. 757 278

70. Sweet Flag *(Acorus calamus)*, "bitter." Root used in making tea useful for coughs, colds, and suppressed menses. Combined with sassafras root for intestinal pains.

71. Heal-All *(Prunella vulgaris)*. The plant top is used to make a cooling drink and body wash for fever.

72. Skull-Cap *(Scutellaria galericulata)*. The plant top is a stomach stimulant, and a laxative.

73. Catnip *(Nepeta cataria)*, "smells good." The leaves are prepared with peach seed to make a syrup, very beneficial for children.

74. Motherwort *(Leonurus cardiaca)*. A tea is made from the leaves which is effective for female diseases.

75. False Solomon's Seal *(Smilacina stellata)*. The root is combined with others as a medicine to cleanse the system and stimulate the stomach. A remedy also for leucorrhea.

76. May Apple *(Podophylium peltatum)*, "flower hangs down." A spring tonic and a laxative are made from the root.

77. Bloodroot *(Sanguinaria canadensis)*. For general debility, a pea-sized piece of root is taken every morning for thirty days. Combined with other roots for a stomach remedy. The plant root provides the face paint used in the Big House Ceremony of the Delaware.

78. Dandelion *(Taraxacum officinale)*. A laxative-tonic obtained from the plant.

79. Virginia Snakeroot *(Aristolochia serpentaria)*. Used singly or combined with wintergreen as a tonic.

80. Fringed Gentian *(Gentiana crinita)*. A tea made from the root acts as a blood-purifier and stomach-strengthener.

81. Black Snakeroot *(Cimicifuge racemosa)*, elecampane and stone root are combined to make a tonic.

82. Milkweed *(Asclepias sp.)*. A tea made from the pounded and steeped roots of the five species of milkweed is a cure for epileptic fits in those born during certain phases of the moon. Such disturbances periodically occur during a particular moon-phase period.

83. Peyote *(Lophophora williamsii)*, "Our Father," is known to have been used to treat periodic fits, and is regarded as a sure cure for tuberculosis.[4] Wi·tapanôxwe carries a small, fringed leather bag, tied with deerskin thongs, containing several peyote "beans" or buttons for use in case of emergency. Certain Delaware subscribing to the "Wilson cult," wear a small beaded bag containing peyote, around their necks as a protection against illness. This talisman is even regarded as an advisory agent of approaching

[4] It is said that this highly valued and potent medicine was revealed to a woman in a dream who gave the knowledge of it to her people. It may be eaten with or without the usual ceremonial rites. For a study of the Peyote rites among the Delaware at Dewey and Anadarko, Oklahoma, see Petrullo, 1934. For more details, consult Safford, 1916, pp. 387, 424; Harrington, 1921, pp. 185-190; and the more recent study of LaBarre, 1938.

domestic and tribal crises. Wi·tapanôxwe is not convinced of the truth of this statement, but claims that he merely carries his own supply for medicinal purposes.[8]

84. Cactus *(Opuntia vulgaris)* is called "thorny, useless." Wi·tapanó·xwe remarked that the Oklahoma negroes singe off the spines and apply a sliced portion to their corns to allay pain.

Miscellaneous Beliefs

1. To draw out frost bites, walk in the snow barefooted. Rubbing snow on the ears will bring relief.
2. Frost or dew gathered in late fall and rubbed on the body will prevent skin eruptions.
3. Water that collects in hollow trees or rocks is believed to have medicinal value.
4. Mud applied to a burn will take out "the fire."
5. To cure a child from slobbering, catch a number of minnows and have the child hold them in his mouth. Repeat this several times a week until the cure is effected.
6. To cure a child of bed-wetting, feed him portions of a roasted "timber rat" * This is believed to effect a sure cure. My informant and a companion once killed and roasted such a rodent, and both agreed that the flesh was palatable and not unlike that of squirrel. They were reticent, however, as to the therapeutic effects.
7. Relief is obtained in the case of whooping cough, if the mother first suckles a puppy and then her child.
8. A spider web applied to a flesh wound will stop the flow of blood.
9. Excrement of cattle or of poultry is employed as a poultice for boils.
10. Skunk-oil is regarded as a valuable remedy for colds and croup. For children the average dose is from three to five drops. A small quantity may be used externally on the throat and chest. Oil obtained from geese is employed similarly for colds. Skunk scent or rabbit urine is put into the ear to relieve earache. Deer and otter scent are also useful for medicinal purposes.

[8] This practice corresponds to one general among Eastern Algonkian peoples—that of carrying a piece of "muskrat root" *(Acorus calamus)* about the person as a disease preventive. A piece of the root is chewed in case of sudden illness.

* Compare use of a white-footed mouse for the same purpose among the Gayhead Indians (Tantaquidgeon, 1930, p. 20).

11. A syrup made by roasting onions is taken for colds. For infants and small children the syrup is sweetened and a few drops taken clear or in milk.

12. Mutton tallow is an emollient for chapped and irritated skin. It is used to make ointment.

13. Muscular cramps may be relieved by bathing the affected parts with urine.

14. A tea made from roasted, charred pig hoofs is beneficial for colds.

15. For snake bite suck the venom from the wound with a hollow piece of deer antler.

16. Treatment of sick horses. Years ago, after their migration westward, the Delaware used horses for travel. Often their animals would become ill during hunting activities on the Western plains. This was believed due to unsuitable drinking water or from eating poisonous weeds. Other disabilities were due to "bots"[6] or colic. For colic, strong tobacco juice, or gun-powder dissolved in hot water was administered. The most effective treatment was to throw a bucket of very hot water containing finely chopped bits of weasel hide[7] over the horse. Then the owner would force his weight up and down on the animal's abdomen or occasionally, beat it with a wet, heavy blanket for ten or fifteen minutes. The horse soon recovered and was again on his feet.

Warrior's Medicine

Warriors long ago also received gifts from supernatural agencies which enabled them to excell in feats of bravery. Their power came in dream-visions in which the identity of the supernatural was made known. Sometimes a power-song was granted at the same time. Certain men were appointed as leaders of the warriors and custodians of the secret formulæ, from which a particular preparation called "warrior medi-

[6] The larvæ of certain flies. Eggs are laid on the inside of the animal's foreleg, gain entrance into the blood stream and are carried to the alimentary tract where incubation takes place.

[7] The hide of the so-called "spotted weasel" is used for this purpose. My informant had never seen this animal but it had been described to him by his mother. It may refer to the ordinary weasel at the period of seasonal pilage change from brown to white. The species known to the Delaware are the Bonaparte (*Mustela cicognani*), and New York weasel (*M. noveboracensis*), Anthony, 1928, p. 102.

right. It is never cooled by blowing upon it. Running water should be used, and it was customary in former times to dip the water with or against the current, or to submerge the container and allow the water to flow in from all sides.[1]

The term *"doctol,"* from English doctor, was the only term for an herbalist obtainable from those interviewed. It is also said both men and women could become practitioners. When calling upon a doctor for treatment it is customary to offer him a present of money. In former times, cloth, tobacco, and other gifts were offered.

GREAT MULLEIN *(Verbascum thapsus)*.

The leaves are crushed and applied as a poultice to bruised surfaces to reduce swelling and allay pain.

NANNYBERRY *(Viburnum lentago)* and mullein leaves are steeped and the tea administered in case of measles.

LIVE-FOREVER *(Sedum telephioides)*

The leaves are crushed and used as a poultice to draw out poison. My informant regarded this to be a most powerful and effective application. He stated that he had suffered from a serious case of infection which resulted from stepping on a rusty nail and that the above remedy cured him in a short while.

PLANTAIN *(Plantago major)*.

The leaves are crushed and applied to bruises.

BURDOCK *(Arctium minus)*.

The leaves are bound on the body to reduce pain. The root is used in making medicine for purifying the blood.

HORSERADISH *(Radicula armoracia)*.

The leaves are applied as a poultice in case of neuralgia.

BITTERSWEET *(Celastrus scandens)*.

The root is used for making medicine which is administered to persons suffering from consumption.

TANSY *(Tanacetum vulgare)*.

The plant is used in making medicine which is effective in treating disorders of the stomach.

[1] My informants could not explain this but said that the water must be dipped in different ways according to the nature of the disease to be treated. It is a common belief that water dipped *with* the current acts as a laxative and *against* it acts as an emetic. Allowing the water to flow into the container from all sides suggests the idea that the remedy to be made would tend to benefit the entire system.

4:Tantaquidgeon E-5 (1930) 1942
NM7 Delaware NM7

278 BONESET *(Eupatorium perfoliatum)*.
757 This is considered to be a very powerful medicinal herb by my informants and it should be used with great precaution according to their belief. Tea made from the leaves is beneficial as a stomach medicine.*

ELECAMPANE *(Inula helenium)* root and poplar *(Populus tremuloides)* bark are steeped together and the liquid drunk to relieve a cold.

CATNIP *(Nepeta cataria)*.
A tea made from the leaves is regarded as a soothing drink for infants.

WHITE PINE *(Pinus strobus)*.
The twigs are steeped to make a medicine which is effective in treating disorders of the kidneys. It is also administered to persons suffering from pulmonary diseases.
[752] The pitch is applied to boils to draw out the poison and reduce the pain.

SWEET FLAG *(Acorus calamus)*.
The root is scraped and hot water poured over it and drunk in case of colds.

BLOODROOT *(Sanguinaria canadensis)*.
A small quantity of the powdered root is added to a half a cup of lukewarm water and a teaspoonful to stop vomiting. The root is also used in combination with other plants in making a blood purifier.

YELLOW OAK *(Quercus muhlenbergii)*.
To stop vomiting, pour water over a piece of the bark and when the water becomes a yellowish tinge drink a small quantity of it.

IRONWOOD or AMERICAN HORNBEAM *(Carpinus caroliniana)* root or bark, and the bark of juniper *(Juniperus communis)*, white oak *(Quercus alba)*, wild cherry *(Prunus serotina)*, and hickory *(Carya ovata)* are steeped together for a tonic. A small bundle of some of each is put into about a pint of water. The mixture is steeped down

*This plant so commonly used by both Indians and whites in those sections of eastern North America where it is indigenous, appears to be regarded as being too powerful to be tampered with by the Six Nations Delaware informants. The Oklahoma Delaware, however, use the plant freely.

to about half the quantity. An equal part of brandy may be added. This is considered to be a month's treatment for one person and is considered to be effective in treating cases of general debility. It is valuable as a remedy for diseases peculiar to women.

My informant (Nicholas Powless) stated that he had bought the remedy, as is customary, from a Delaware herbalist. After a prolonged illness, during which time he was in the hospital, Mr. Powless was brought home, as he said, apparently to die. He obtained the formula just noted, made up the medicine and is taking it daily. He claims that he has continued to regain his strength and is slowly recovering from a complication of diseases pronounced incurable.

A tea made by pouring hot water over a small quantity of soot is given to babies in case of colic. A stronger tea is beneficial for a sick cow.

A powder obtained from decayed pine *(Pinus strobus)* is used for babies because of its healing properties.

SUMAC *(Rhus typhina)*.

A tea made from the berries is drunk as a remedy for diarrhea.

Skunk oil and molasses is taken for colds and cramp. The oil rubbed on the throat and chest sparingly tends to relieve congestion. Goose and raccoon oil are used similarly.

Rattlesnake oil is valuable in treating stiff joints. It is very powerful and should be used sparingly. Only a few drops on the finger tips and applied to the affected parts. The skin may be bound on the wrists and ankles to strengthen them.[4]

[4] When told of the belief that snake oil, if used alone, "will unjoint you," an idea common among the Wampanoag of Cape Cod, Mass., my informant laughed and said that he knew that it would not because he had used it on his joints with good results. His sister added that if he could obtain some rattlesnake oil, now he might keep in better condition.

Death

761 Early burials which have been excavated reveal few objects buried with the body although Penn indicates that it was customary among the Lenape to place objects in the graves (p. 37). Skinner is of the opinion that this may have been a custom which was coming into more common practice during the period we are dealing with (Skinner, 1909, p. 50). Of about equal occurrence are flexed and secondary bone burials. A Delaware burial has been described by Lindstrom: "...a round pit is dug in the ground and a stool is placed in the hole upon which the dead man shall sit. Then the dead man's money is placed upon him and he is set down in the pit upon the stool with a tobacco pipe a fathom long in his mouth...". After the hole is filled up, "...they dig down in the corners of a square four very long poles upon which they make three shelves, and decorate the poles with long strips of blue, red or green frieze,[16] hanging like fringes." The bones were later dug up and the flesh cut from them after which they were wrapped in chestnut bark and placed on the bottom shelf where the bundle was allowed to stand until it rotted. (Lindstrom, pp. 249-250).

765 Above the body there has frequently been found a layer of shells which has been interpreted as evidence of a feast of the dead (Skinner, 1909, p. 50). Other features of the death ceremonies noted by early writers are: the use of charcoal on the face as a sign of mourning (Penn, p. 37; Danckaerts, p. 159), the sending of a messenger to all friends to announce a person's decease and loud lamentations at the grave. The name of the deceased was not mentioned (Lindstrom, pp. 249-250). Many of these features are incorporated in Heckewelder's excellent description of the funeral of a chief's wife (Heckewelder, 1881, pp. 269-276).

784 551

Disease

753 Disease was classified into natural illness and sickness caused by witchcraft and spirits of the dead. This classification is reflected in the many different types of cures which the Delaware practiced. Curing was one of the few activities placed in the hands of professional people, the shamans, although purely medicinal cures were also performed by laymen. The shamans used a combination of medicines, magic, sweating, bleeding and psychotherapy to effect their cures for which they were paid. Penn says that the Delaware will give anything to be cured and this is echoed by later writers (Penn, p. 36; Heckewelder, 1881, p. 232).

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757 Medicines which were taken internally were made from bark and roots mixed with water (Penn, p. 36; Heckewelder, 1881, p. 224-231); likewise, plants with medicinal properties were made into poultices for wounds, boils and snake bite (Heckewelder, 1881, p. 229; Loskiel, p. 113). The shaman might also breathe on the patient or blow his remedy over the patient's body. In addition to making and giving these remedies, the shaman frequently put on a performance in which he grimaced and acted in such a way as to frighten away the evil spirit which

was possessing the sick person (Danckaerts, p. 180; Lindstrom, p. 247). Possession by an evil spirit was believed to occur either though an accidental encounter with a human spirit or sorcery. The practice of the latter among the Delaware was largely confined to the curing shamans themselves (Zeisberger, 1910, pp. 125, 128, 131; Speck, 1931, p. 109; Brainerd, p. 347).

Sweating was done regularly, but was also considered beneficial in illness. The sweathouse was made of stone and clay with a hole at the top large enough to crawl through. A large number of stones were heated red hot and then put in the center. The bathers lay around them, water was poured on the stones and the hole stopped up. The sweating was followed by a plunge in the nearest stream (Lindstrom pp. 257-258). Penn witnessed a chief using this cure in the midst of winter, when a path had to be cut through the ice between the sweathouse and the river. (Penn, p. 55).

CONCLUSIONS

From the foregoing, it appears that quite a complete picture of Delaware life at the time of white contact can be reconstructed, based on observations made shortly after contact and supplemented by more complete descriptions of these customs by later observers. The method used in this paper brings out clearly, on the other hand, the fact that there was insufficient recording of the social and political organization of the tribe to permit a reconstruction of those aspects of life with any high degree of probability. By the time the Moravian missionaries came in contact with the Delaware culture, one hundred years had elapsed since initial contact and there is little basis on which to determine whether any trait mentioned by the missionaries represents an old, modified or new situation. This conclusion is in contrast with that of other writers on Delaware culture who have ignored the fact that their material was gathered at widely different times and places.

7:Speck E-5 (1928-1932) 1937 NM7 Delaware NM7
Lenape

MISCELLANEOUS RITES

The Scratching Rite for Warriors

In the nature of an ordeal by which the man of strength showed his courage when preparing to go to war or to enter one of the physical contests, we learn that he scratched himself on the body. In the same operation he purified himself. Tradition is vague on the details, but in this rite we meet with one that is of apparently southern origin in view of its almost universal observance among the Indians of the southeastern or Gulf area. Our information does not permit of much discussion of the spiritual or physical qualities of this heroic practice, therefore it will have to stand simply as an occurrence to be noted in the study of distribution of the scratching rite as one of therapeusis and purification. It is called *le'həli·k'ci·'k·an*, "scratching."

The rite is mentioned by Lindeström as practiced medicinally by the Delawares in the middle of the seventeenth century for the purpose of relieving pain and fatigue after a strenuous journey, and also as a means of preventing them before one.[1] A piece of flint was the scarifying agent. *Wi·tapano'zwe* had heard that a fish bone had also been used, but there were no particulars given as to how the instrument was constructed.[2]

In 1756 John McCullough was held captive by the Delawares and adopted by them. During his captivity he observed many customs of importance. Among them he writes of being subjected to a punishment intended for mischievous boys in which the miscreant was scratched on the thighs and legs with the bill of a gar-fish wrapped in a thin rag so that the teeth projected through. Sometimes, he added, if punishment were merited a second or third time, the corrector would score the boys from the top of the shoulder down to the wrists and again from each shoulder to the hip, forming a

[1] Lindeström, *op. cit.*, 244. (Ed. A. Johnson, Philadelphia, 1925.)

[2] Bone scarifiers are known to the Cherokee and Catawba of the Carolinas.

8:Lindeström T-5 (1654-1655) 1925
NM7 Delaware NM7

CHAPTER XXIV.

Concerning the Ailments, Wonderful Medicines, Tyranny, Blood-Letting and Patience of the American Indians.

These savages are by nature a healthy people and are rarely subjected to diseases, before death surprises them, or if it may happen that some contagious disease should come into the country, through which whole nations could die out, as has happened formerly among them here.

The French disease[1] sometimes indeed rages among the savages, because they live in such unchastity and adultery, like irrational brutes; but against this they have a white kind of ointment, and cure themselves, after which it goes its way, as though it were wiped away by the hand.

Whoever is wounded by the poisonous rattlesnake and is not cured and treated by the medical doctor of the savages, who is called the devil-chaser,[2] then there is no hope for the life of that patient any more, but he must die; for the savages have such splendid medicine against it,[3] that they immediately drive away the poison with it and cure it. For this purpose they use a kind of grass

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[1] *Morbus fransman.* Cf. Williams, *Key*, 158. See also *London Chronicle*, Oct. 6, 1757; Peter Kalm, *Journal; Mss. 1§12 Yi, Ridgway Library.* For their remedies, see further Van der Donck, De Vries, *Vertoogh*, etc., *N. Y. Col.*, 2, I, 156; II, 269, etc.; Heckewelder, *Indian Nations*, 224 ff.; Speck, *Med. Prac. of the North. Algon., Proceed. of the Nine. Int. Cong. of Ame.* (1917), 303 ff. They even understood the value of mineral water.

[2] *Dyfweliagarea.*

[3] That is: the poison of the rattle snake.

8: Lindeström T-5 (1654-1655) 1925
NM7 Delaware NM7

roots, which are called snakegrass-roots. These roots grow very much intertwined, like a very fine and close comb. These they chew to pieces and place them with sober spittle[4] on the sore and the bite, which has such a power by its application, as has been stated. But 2 or 3 of the Swedes there in the country, as I know, were wounded by these snakes. They immediately swelled up terribly and were dead within an hour, for they lacked these medicines.

These snakes are spotted, yellow and black, and on the tail they have horn-joints, one joint for each year, according to his age.[5] [They] have scent of a human being far away, [and when the snake scents a person] then he puts his tail in the air to shake and agitate, so that it is heard far away from him, with a sound like children's rattles with pease in them, yet very loud, so that a person can through this guard himself against it. Concerning this I have formerly discussed it somewhat in the chapter concerning the childbirth of the savage women and [stated] that the skin of this rattlesnake is found to be very splendid for pregnant women, that when they tie this around themselves, then they are immediately relieved of their severe childbirth.[6]

Concerning this, as well as many other innumerable[7] [things] one may well marvel at the splendid and miraculous medicines of the savages; so that if it is not a fatal disease, they know n

[4] *Nychter spått.* Perhaps fresh rather than sober saliva.
[5] Cf. above, Chapt. VIII.
[6] See above, Chapts. VIII, X, note 5. Cf. Williams, *Key*, 125 ff.
[7] *Orecitterligit*, unrecitable.

8: Lindeström T-5 (1654-1655) 1925
NM7 Delaware NM7
Iroquois NM9

remedy for it immediately, which they keep very secret from the Christians. "*Sed contra vim mortis, non est medicamen in hortis.*[8] p 757

In this connection I also want to mention briefly what happened among the Black Minquas further in the [interior of the] country, with 15 individual Englishmen whom they had taken prisoners; from which one can learn of the horrible cruelty of the Minquas. It happened that the English of Virginia carried on war against these Minquas. When the English now came to these savages, marching 2 or 3 hundred men strong, with a few [small] field cannon,[9] they pitched their camp a short distance from the dwellings of the above-mentioned savages. But these savages are somewhat cleverer in building, than our own river Indians who live closer to us, using palisades around their dwellings. Therefore the English did not run, precipitously upon them, but first fired a few cannon [balls against their fort]. Then the English did not know a word about it, before the savages had surrounded[10] the English, were in their rear and drove them into flight, killing some of them and brought home with them 15 prisoners, whom they later, after the lapse of a few days, martyred to death wretchedly and unchristianlike. Because some of these prisoners were of noble birth and of some importance and value, the English offered for each one of them a few 100 florins I 727

[8] For against the power of death, there is no medicine in gardens.

[9] *Feldtslangor.*

[10] *Hade the engelske berändt.* Beränna usually means to surround, to invest, but here it perhaps means to go around, so as to get to the rear of the enemy.

26. Moral superintendence of Supreme Being over worshipers		−	(+)		+	+	+	−	+	+	+	776
27. Pray to Him for favors or assistance	+	−	+	+	+	+	+	−	+	+	+	782
28. Deposit tobacco on stones, mountains, etc. for favors					+	+	+		+	+	+	775
29. Tobacco sacrificed for success in hunting	+	+		+	+	+	+	+	+	+	+	793
30. Believe in a future state of punishments and rewards	+	+		+	+	+	+	+	+	+	+	775
31. Final judgment						+	+	+	+	+	+	754
32. Mental or corporeal pleasures in future state of existence		+		+	+	+	+	+	+	+	+	794
33. Judgment immediately after death		+?				+	+	+	+	+	• +	164
34. Souls of worthy go to place of happiness or abode of Supreme Being	+	+		+		+	+	+	+	+	+	757
35. Souls of bad go to land of bad spirits or hell							+	+	+	+	−	756
left on earth or no good place	+	+		+		+			−	+	−	755
36. Tortured or unhappy in either place		+		+		+			−	+	−	343
37. Direction of habitation of good souls	SW	S		S		Up	S	•	Up	Up	W& Up	Up
bad souls						Up	•	•	Up		Up	Up
38. Believe in ghosts		+		+		+	+	−	+	+	+	S
39. Have priests	+	+		−		−	−	−	−	−	−	−
40. Witches and wizards		+		+	+	+	+	−	+	+	+	+
41. National worshiping society †				+	+	+	+	−	+	+	+	+
Medicine												
42. Diseases to which peculiarly liable †												
Bowel disorders				+	+	+			+		+	−
Consumption					+					−	−	+
Pleurisy						+					+	
Chills and fevers	+			+	+			+		+	+	+
Dysentery				+							+	
Rheumatism				+	+					−	• +	−
Boils				+							−	
43. Remedies usually roots and herbs	+	+	+	+	+	+		+	+	+	+	+
44. Bleeding common			+	+	+	+		+	+	−	+	+
45. Cupping common				+						−	−	−
46. Sweating common	+	+	+	+	+	+		+	+	+	+	+
47. Medical profession	+	−	+	+	+	−		+	+	+	+	+
48. Receive any education					−	−		−	+	−	+	−
49. Called by divine agency in youth									+	+	+	−
50. Count pulse						−		+	+	+	+	−
51. Inquire into nature of complaint						+		+	+	+	+	+

9: Kinietz E-4, 5 (1938) 1946
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A cogent reason for the survival of religious beliefs of the Delaware was the vehicle by which they were transmitted from generation to generation, the national worshiping society or Big House. The reaction to the introduction of white ways expressed itself in the integration of a number of original ceremonies. Some Christian elements were unconsciously incorporated along the way, but these were principally modifications of, rather than substitutes for, native concepts. The accounts of the national worshiping society given by John Johnston and Captain Pipe are included in the section of ethnographic notes.[1] I have discussed some of the changes in the ceremony itself during historic times in another article.[2]

Medicines

The information on the ailments prevalent at the time of first contact with the whites is very limited. Williams indicates that chills and fevers and toothaches were the most common disturbances to the health of the Narragansets. He and Lindeström mention plagues and the French disease among the Indians of their time. Smallpox was a plague for which Williams gave a native name. From their lack of resistance to many diseases prevalent in Europe, it has often been postulated that the Indians had not been exposed to them before white contact. The evidence compiled in this study neither proves nor disproves this assumption, although, of course, the modern informants say that in ancient times the Indians were very healthy and had no ills until the white man introduced them. This is in accord with the principle of former good times that is universal in its application.

Changes between early and late periods show up in two elements but are open to question as to the reliability of interpretation of the early information. First, Zeisberger, alone of the authors of the sources, reported cupping in practice among the Delaware (45). This was denied by all the modern informants although cupping by sucking was known among other tribes.

[1] See *post*, pp. 93-97.

[2] Kinietz, Vernon, "European Civilization as a Determinant of Native Indian Customs," in *American Anthropologist*, N. S. XLII(1940), 116-21.

9: Kinietz E-4, 5 (1938) 1946
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●757 Since Zeisberger merely listed cupping as a therapeutic device without giving any details, it is impossible to check his statements absolutely. The other element indicating change is in the union
756 793 of the medical profession with the priesthood (53). As suggested previously, shamans may have been meant by priests. If this was so, of course, the two were united, but, if by "priests" was meant the leaders in the ceremonies of the tribe, the later sources and the informants deny such a union. Our information from the earliest accounts of the ceremonies is insufficient to judge whether there has been a change in function or a change in terms.

757 Evidence on the practice of counting the pulse was equally divided in both the third and fourth periods (50). Entire absence of information on this point prior to 1822 and the division of opinion thereafter strongly suggests that this element was borrowed from the whites sometime around the beginning of the nineteenth century but was not completely accepted.

343 Sweat baths were mentioned in every period as a cure or pre-
756 ventive of disease (46). They were also described by Lindeström,
755 but he did not attach any benefits to their use. The three older informants, J. W., W. T., and W. L., reported that there was a separate category of shamans called sweat doctors who used the sweat bath partly for its curative properties but principally as an aid to diagnosis. The fact that use of juggling tricks by medicine men was not uniformly reported by the sources may be explained by the statements of the informants who claimed that only the sweat doctors used them (54). The sweat doctors might effect their cures with sweat baths or they might merely make a diagnosis and leave the cure to some other shaman. A description of a sweat doctor's procedure was given by J. W. as follows:

755 "J. W.'s father was a sweat doctor. Had vision. Only those built houses. Built fire, put in six limestone rocks, dug little hole on north side of sweat house inside for rocks after they were hot. Pallet for patient on south side of hole, head outside (on east side) of blankets covering house. Leaves patient there ten to fifteen minutes while old man is getting ready a gallon of water with weeds of a certain kind immersed in it. Strips to breech

10: Speck E-4, 5 (ca. 1925) 1931
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436 sweeping, and general order of the premises receive their pay in
796 wampum beads; the pecuniary value of which amounts to hardly more than a few cents. The drummers, the singers, the dance leaders, the reciters of visions are in their turn rewarded with small donations of wampum at the conclusion of their performances. This is a purifying gift rather than a pecuniary payment, one entirely out of proportion to the worth of service rendered.

[437] The worshipers of the Big House also offer their donations toward the ceremony in strings of wampum, giving them to the Master-of-Ceremonies, saying; ce·la·'yu'ni· ndeli·' wi·teinge·'n note·'ha·'n "This here is how much I help from my heart!" The sacrosanctity of wampum is furthermore emphasized by the religious rule that wampum should always be given when something has been received, even when only a gift from a friend. In the esteem of the natives it becomes a most potent medicine. Failure to carry out the rules governing the bestowing of wampum would bring sickness upon the receiver of property through exchange or the receiver of a gift. This is especially
● [438] true in connection with the Delaware practice of medicine, because medicine although destined to heal can double upon itself and become a poison when not sanctified by the conveyance of wampum.[1]

436 In Delaware phraseology "wampum is our heart." In exchanges of
425 vendable property, even extending to gifts between friends, there
751 lurked a potency for evil that might develop in who knows what quarter, producing malice or resentment among the parties concerned. It could even result in bodily poison to one or both. It is strictly correct to state that in the attitude of the eastern Indians toward such affairs the transfer of shell money from the hands of the receiver of a gift or a purchase to those of the giver performed the function of medicine.

436 The wampum protected them against spiritual infection and its
755 manifestation in the body in the form of sickness. Wampum was a purifier, purging the transaction from latent evil force. And should evil have leaked through the transaction the wampum would function as a purgative for its keeper. The same wampum was a spiritual emblem believed by them to have come originally from supernatural sources and embodying within it profound supernatural dynamics.

436 We can understand why a compact sealed with the transfer of
439 wampum was as sacred as one sworn to under oath by Europeans. It was such an attitude toward exchange and currency that our colonial forebears encountered when they bartered for land and peltry with the aborigines of New England and the Middle Atlantic States. The colonists handed out their exchange with the European notion of in-

[1] I am of course speaking of Delaware therapeutics exclusively, although something along the same line may be said, by those who are inclined toward a critical attitude, of civilized medical practices.

10: Speck E-4, 5 (ca 1925) 1931
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NOTE II

THE MYTH OF RED CEDAR AND THE SEVEN STARS

539X 121 [776]

Reference to the stars and to the cedar tree as spirit-forces in the course of the text seems to call for the insertion of the following narrative in the study. It was dictated by Witapano'xwe in explanation of that part of the ceremony in which cedar was given to the fires in the Big House as spiritual 'food.'

RED CEDAR A SACRED TREE

539X 824 [757 783]

Now I am explaining what is the purpose of him our Grandfather Cedar,[1] how in many different ways it is used. When a person has a swelling in his feet or his legs it is good medicine as a steam bath for one to reduce swelling. And when after a recent death anywhere that cedar is used for purifying the house.

And when the Delawares worship in the Big House cedar is always used for purifying the Big House. And that night when the time arrives for its use it is said to be a purification-agency and also all the red men who understand this Medicine-eating[2] know that the cedar is used. Although two other different kinds are used as well for purification when this Medicine-eating is going on.

[776 757]

But that cedar is the leading spirit-force that is given for strength for anyone's healing, when inhaling the smoke. Because that very thing is the purpose intended in treating and healing his grandchild when he begs it of him.

539X 773

A very long time ago in the life of the Delawares we have heard our deceased ancestors how they said, in ancient times when there were living men of great spiritual power; seven of them, it was said, all at once were not seen any more. They had gone those prophets, men departed. But young pure youths[3] blessed with a vision of something all at once while walking about along the ridge among rocky cliffs—all at once a thing upright there, seven stones almost alike. And then it was said that all at once the youth was thence spoken to by one of these stones. Then they came to be known.[4] And more and more

[1] The specific native term for cedar is a derivative of "popping."

[2] This is the proper designation in Delaware for the Peyote ceremony; "Medicine-eating" referring to the eating of the Peyote bean (Lophophora).

[3] One need hardly be reminded that these are the young men ignorant of the ways of the world, of sin and carnality, brought up under the tutelage of solicitous parents, observant of the religious rules and guided in their conduct of life by the spirit-forces which appeared to them; the life ideals of the Delawares.

[4] Indicating that these prophets to escape the importunities of people seeking help from them had concealed their identity by transforming themselves into rock among the mountains.

10: Speck E-4, 5 (ca. 1925) 1931
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widely persons constantly went there because those prophet men were there. All of a sudden when several had gone there to the place where they were, no person was seen there. But again after a very long time some one found them. Here were these seven beautiful appearing pine trees. And some of the individuals appeared as cedars in outward appearance. This very thing there shows evidence that they are closely related, the cedar and the pine, although in a different way gifted with the power of spiritual force when created by the Creator. However, they were placed together as one since both are conjurors.

And there is more than one way otherwise to use the cedar, for the purpose of coloring.

Again they notice that those prophet-men had become trees. Again they went away and it was a very long time afterward before they found them again. As soon as they were known here these had formed in a group up above in the middle of the sky as seven stars[1] and they are called, when they are seen, as though they were great persons, for which reason from then on until now they never stay in one place during the year. That is what was said by our ancestors from whom it was rightly known that the cedar was of medicinal purpose.

[1] The Pleiades.

[P. 35, B]

562
571 women, and might safely therefore be more "friendly" with them.

Oral Fixation

153 There is some evidence to suggest a preoccupation, which had a large component of aggressiveness, with oral needs. This concern with eating (and with other oral phenomena, such as ritualistic pipe-smoking, naming, and oratory), which reached far beyond subsistence requirements, can hardly be ascribed to a realistic subsistence anxiety since the Delawares had ample supplies of animal and vegetable foods at their disposal, and adequate techniques for cultivating, gathering, preserving, and storing them. It is worth [787] mentioning that the pubescent Delaware solicited the favor of a guardian spirit by self-imposed fasting; the spirit was supposed to pity him and appear in a vision; later the spirit would be important to him in helping to secure food.[23] Oral rituals, often with a compulsive quality, were a [527] recurrent institutional theme: almost all social gatherings involved eating, smoking, and oratory, and some were frankly eating-orgies—the famous "eat-all" feasts, for example; the fondness for liquor may be regarded as an oral trait of compulsive [757] character;[24] internal medicines were usually [758] taken as liquid herbal infusions, usually in large doses;[25] the sick lived on a liquid [754 diet;[26] suicide and witchcraft were both 762] accomplished in most cases by poison taken by mouth;[27] tortured prisoners were some-[727 times ceremonially eaten, and hunger 266] cannibalism was reported;[28] war parties made a ceremonial feast the night before their departure;[29] emetics were extensively [757 used in the treatment of disease, and vomit-777] ing was thought to relieve a sense of guilt, and also to bring luck.[30]

23. Zeisberger, 1778, pp. 132-133.
24. Zeisberger, 1778, p. 116; Heckewelder, 1819, p. 263.
25. Zeisberger, 1778, pp. 24-25; Tantaquidgeon.
26. Zeisberger, 1778, p. 24.
27. Zeisberger, 1778, p. 125; Heckewelder, 1819, p. 258.
28. Heckewelder, 1819, p. 199; Zeisberger, 1778, p. 107-108.
29. Zeisberger, 1778, p. 103.
30. Zeisberger, 1778, pp. 84, 133-134.